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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/826,710	04/05/2001	Rajendra Kumar Bera	JP920000136US1	3960

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EXAMINER	
EHICHIOYA, FRED I	

ART UNIT	PAPER NUMBER
2172	15

DATE MAILED: 05/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/826,710	BERA, RAJENDRA KUMAR	
	Examiner	Art Unit	
	Fred I. Ehichioya	2172	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 - 7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 - 7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, with respect to claims 1 – 7, filed March 11, 2004 have been fully considered but they are not persuasive for the following reasons.

Applicant argues: Aiken 's teachings do not even suggest identifying a minimal portion of data that contains matches with all of the data fragments in a search query, wherein at least one of the data fragments appears only once in minimal portion, as claimed in the present. The passage in Aiken relied upon the Office action for the rejection refers to a "minimal sequence" of Aiken is not like the "minimal portion" of the present invention. The "minimal portion" in the present application and claims has specifically stated meaning. This means, among other things, that some, but not all, of the data fragments in the query can appear more than once in the minimal portion of data. At least one data fragment must appear only once in the port, or else the portion is not "minimal." (Page 7, Paragraphs 1 and 2).

Regarding applicant's arguments, it is respectfully noted that Applicant's arguments appear incommensurate in scope with the limitations of representative claims 1, 6 and 7. In particular, the examiner does not see where the "minimal portion" must comprise some, but not all, of the data fragments appearing more then once.

It is noted that Aiken's query and show in Fig.3 and column 15, line 3 through column 16, line 27, "This is it folks" can be fairly interpreted as a conglomeration of data

fragments. Aiken matches sequence (minimal) portions with said fragments (i.e. portion "thi" matches with its sentence fragment "thi" in the query). Since the letters "t", "h" and "i" appear only once within the matched sentence fragment, said data fragment appears only once in the minimal portion, therefore the claimed limitation is rendered obvious over the art of record at the present time.

There is nothing in the claimed limitations, which preclude the examiner from this interpretation.

2. Examiner respectfully disagrees with all of the allegations as argued. Examiner, in his previous office action, pointed out exact locations in the cited prior art.

In view of the above, the examiner contends that all limitations as recited in the claims have been addressed in this Action. For the above reasons, Examiner believed that rejection of the last Office action was proper.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA

1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application, See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 1 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent Number 6,625,599. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are substantially similar in scope and they use the same limitations, using varying terminology.

The difference between claim 1 of USP 6,625,599 and instant claim is that claim 1 does not recite the term "identifying a minimal portion of said data that contains matches with all of the data fragments, wherein at least one of the data fragments appears only once in the minimal portion".

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to exclude the term "identifying a minimal portion of said data that contains matches with all of the data fragments, wherein at least one of the data fragments appears only once in the minimal portion" because the person would have

realized that the remaining elements would have performed the same functions as before. "Omission of element and its function in combination is obvious expedient if the remaining elements perform same functions as before." See In re Karlson (CCPA) 136 USPQ 184, decide Jan 16, 1963, Appl. No. 6857, U.S. Court of Customs and Patent Appeals.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

   (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,694,593 issued to Baclawski, Kenneth P. (hereinafter "Baclawski") in view of U.S. Patent 6,493,709 issued to Alexandria Aiken (hereinafter "Aiken").

Regarding claims 1, 6 and 7, Baclawski teaches a method for searching data to locate a portion of said data identified by a search query, the method comprising:

receiving a search query including two or more data fragments expected to be contained within said data (see column 2, lines 12 – 13);

searching the data to locate matches between the data and the respective data fragments (see column 2, lines 13 – 14); and

Baclawski does not explicitly state identifying a minimal portion of said data that contains matches with all of the data fragments, wherein at least one of the data fragments appears only once in the minimal portion.

However, Aiken discloses identifying a minimal portion of said data that contains matches with all of the data fragments, wherein at least one of the data fragments appears only once in the minimal portion (see column 15, line 3 through column 16, line 27).

It would have been obvious to one of ordinary skill in the art at the time the invention was made where minimal sequence is minimal portion of the search data. The minimal sequence is obtained by traversing the fragment of the search document. The motivation is that the system comprises a plurality of data storage units and application, which generates a search request using the fragments of the query to perform a search on its respective database. These fragments make the search quick and cost efficient.

Regarding claim 3, Baclawski teaches the steps of:

(i) receiving said data in a computer memory (see column 1, lines 32 – 42);

(ii) receiving a search query comprising two or more data fragments (see column 2, lines 12 – 13 and column 3, lines 25 – 26);

(Iii) searching the data to locate matches between the data and the respective data fragments (see column 2, lines 13 – 16);

(iv) recording the memory addresses of said matches (see column 7, lines 29 – 31);

Baclawski does not explicitly teach (v) for each match, identifying any partial overlap with any other match; (vi) for any such partial overlap, searching said data to seek a new match which does not overlap any other match; and (vii) identifying a portion of said data from the location of the first to the last non-overlapping match

Aiken teaches (v) for each match, identifying any partial overlap with any other match (see column 14, lines 10 – 11);

(vi) for any such partial overlap, searching said data to seek a new match which does not overlap any other match (see column 14, lines 11 - 15); and

(vii) identifying a portion of said data from the location of the first to the last non-overlapping match (column 14, lines 19 - 28).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Aiken with the teaching of Baclawski wherein an entry in the output search list, this entry including the file name, offset and length of the overlap area are created. The motivation is that the offset can also be included in the entry, and used to order the fragment search. This effectively minimizes the search time.

Regarding claim 5, Baclawski teaches displaying said data upon a display screen and highlighting said identified portion of data (see column 9, lines 40 – 44).

6. Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baclawski in view of Aiken and further in view of U.S. Patent 5,884,303 issued to Brown, Anthony Peter Graham (hereinafter "Brown").

Regarding claim 2, Baclawski or Aiken does not explicitly teach identifying a portion of said data containing all of said data fragments and extending between:

an end location which is the location of the first match with that one of said data fragments which is the last to appear in the data; and

a start location which is the location of the match, next preceding said end location, with that one of the said data fragments which is the first to appear in the data.

Brown teaches an end location which is the location of the first match with that one of said data fragments which is the last to appear in the data (see column 4, lines 56 – 57); and

a start location which is the location of the match, next preceding said end location, with that one of the said data fragments which is the first to appear in the data (see column 4, lines 48 – 53).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Brown with the teaching of Baclawski and Aiken wherein the start position and end position determine a match of the search fragment. The motivation is that this combination produces an efficient and extremely high data search rate.

Regarding claim 4, Baclawski and Aiken disclose the claimed subject matter as discussed in claim 1. Baclawski does not explicitly teach the steps of: (i) storing the data fragments in computer memory as a string variable; (ii) searching the data to locate the first match between the data and each data fragment and, for each data fragment, store the location of that first match as a respective pointer variable; (iii) by reference to the pointer variables and the string lengths of the data fragments determining any partial overlaps between said matches.

Brown teaches (i) storing the data fragments in computer memory as a string variable (see column 3, lines 37 – 41);

(ii) searching the data to locate the first match between the data and each data fragment and, for each data fragment, store the location of that first match as a respective pointer variable (see column 1, lines 15 – 18, column 3, lines 37 – 41 and column 4, lines 49 – 50);

(iii) by reference to the pointer variables and the string lengths of the data fragments determining any partial overlaps between said matches (see column 4, line 51 and column 5, lines 1 – 4);

(iv) for any such partial overlap, searching the data to locate the next match with the relevant data fragment and store the location of that next match in a respective further pointer variable (see column 4, lines 48 – 53 and column 5, lines 1 – 2);

(v) by reference to said pointer variables determining any remaining partial overlaps between said matches and repeat step (iv) until there is identified a portion of

said data containing all of said data fragments without any overlaps therebetween (see column 3, line 57; column 4, lines 64 – 67 and column 5, lines 1 – 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Brown with the teaching of Baclawski and Aiken wherein searching the data to locate the next match with the relevant data fragment and store the location of that next match in a respective further pointer variable. The motivation is that the system comprises a plurality of data storage units and application, which generates a search request using the fragments of the query to perform a search on its respective database. These fragments make the search quick and cost efficient.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred I. Ehichioya whose telephone number is 703-305-8039. The examiner can normally be reached on M - F 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene can be reached on 703-305-9790. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Fred I. Ehichioya
Examiner
Art Unit 2172
May 11, 2004

SHAHID ALAM
PRIMARY EXAMINER